NOVEMBER/DECEMBER 2023

GPH33/DPH33 — MICROPROCESSOR AND MICROCONTROLLERS

Time : Three hours Maximum : 75 marks

SECTION A — (10 × 2 = 20 marks)

Answer ALL the questions.

1. Name any two transfer I/O instructions in 8085.
2. Differentiate between MOV and MVI instructions.
3. What is the difference between Synchronous and Asynchronous data transfer.
4. Write the size of FIFO ram in 8279.
5. State the purpose of PSW register in 8051.
6. Name the flags in 8051.
7. How many interrupts are there in 8051?
8. Give examples for bit level instructions of 8051.
9. How does PUSH instruction work in 8051.
10. Distinguish between LCALL and ACALL instructions of 8051.

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SECTION B — (5 × 5 = 25 marks)

Answer ALL questions.

11. (a) Write an assembly language program for multibyte addition.

Or

(b) Draw the timing diagram for the memory read cycle.

12. (a) Write a note on Memory Mapped IO.

Or

(b) Discuss about the architecture of 8279 IC.

13. (a) Analyse the internal RAM organisations in 8051.

Or

(b) Explain in detail about the special functions registers of 8051.

14. (a) Discuss in detail about the software interrupts of 8051

Or

(b) What are the different addressing modes available in 8051? With examples explain each mode.

15. (a) Explain the steps involved in interfacing keyboard with 8051.

Or

(b) How does a 7 segment display interface with 8051?

SECTION C — (3 × 10 = 30 marks)

Answer any THREE questions.

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16. Explain about the instruction sets of 8085 with examples in each category.

17. Write in detail about the architecture of 8255 IC? What are the various working modes of it?

18. With a functional block diagram write about the architecture of 8051.

19. What are the various arithmetic operations that can be performed by 8051? Explain in detail about each operation.

20. Explain the JUMP instructions of 8051 with their range.
